[P. 15b] Tachi

226 278 Fish poison (yaʔha) was made from a white flower which was pulverized and thrown over quiet water or a pond. The fish were scooped up in baskets as they came to the surface. The same flower was used in an infusion for headaches; it grows commonly on the plains (not identified). Another poison, undescribed, called tʻilil, was mentioned by M.G.

223 Ducks, mudhens, and other water fowl were caught with nets set up among the tules, but the exact manner of operation of the nets could not be described. The Wowol secured ducks for Estudillo; "...in less than half an hour, within my sight, they caught many with snares which they had in the lake."[39]

Again Mayfield supplies an eyewitness description from the Tachi.

> Sometimes three or four Indians would go out on the lake on one of the fishing rafts and hunt ducks and geese and stay out there as long as a week. During this time they poled the raft around through the tules and ate and slept on it.
>
> They would throw loose tules over the raft and themselves, forming a blind. Then, through the hole in the center they would slowly pole the raft...In this way they would approach within a few feet of ducks and geese and shoot them from the blind with bows and arrows.
>
> Sometimes they would catch the ducks that flew overhead with a net. This net was a good deal like the net fishermen use to take trout out of the water after they have hooked them. It was about two feet across the mouth. They also snared ducks and geese among the tules.[40]

222 Of vegetable foods, sopas (arrowhead?) was the staple.[41] It was not put in a mortar at first, but in a depression in the ground, where it was trampled. The leaves and seed pods were [252] picked out; the seeds were put in a mortar and pounded. The flour, wetted with water, formed a mush called soʻpasːn saʻsa. There is a doctor's song about this foodstuff.

●[251] Tule roots (puʻmuk) were gathered, dried, pounded, and used as a flour for mush. Tule seeds (tsos)were also used. Before they ripened, the tule heads were tied together in bunches where they were growing. When ripe, the seeds were knocked off into a basket and the heads released. In February J.A. said, "We should be going around now to see how they are getting along. Then maybe next month tie them up."

[48] Acorns in the neighborhood of Kingston were available to the Tachi. They went up there after them; men climbed the trees and shook down the acorns with hooked sticks while women collected them in burden baskets.

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[39] Gayton, Estudillo, 78.

[40] Latta, Uncle Jeff's Story, 32.

[41] On another occasion J.A. said sopas was a plant with "large leaves and red berries."

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29

343 The ramada or shade, čɛ ́niu (Kroeber, ch'iniu), was constructed of four or more posts set in parallel rows. Beams were laid between them, the whole covered with more cross poles, and finally masses of tule or willow brush were laid on top.[157] The ramada was not always in front of the dwelling house, but in the Central Foothills was as often at the side. This structure, so simple and so necessary in the summer heat of the region, has been adopted by white settlers throughout the San Joaquin Valley.

343 251 Storehouses and bins.---A prosperous family of average size had at least one storehouse erected close to their home. This was a small replica of the conical dwelling, save that it had a floor of logs raised off the ground to prevent moisture from settling in it. This form of storehouse is not to be confused with the small acorn storage bins or "granaries." In it were kept baskets, pottery, and the supplies of dried meat, dried fish, seeds, shelled acorns, and other foods in immediate use.

There were various methods of storing the major portions of the acorn crop. Sometimes pits in rocks were filled with acorns and a small, conical, grass-thatched shelter was erected over them. Or if nothing better could be contrived, acorns were stored in hollow trees. The best and commonest method of storage was in a barrel-shaped "granary" set upon a flat, water-shedding rock. Four to six uprights were held in place with horizontal split [285] willow bands.[158] This was lined with a tule or fine brush mat, and the bottom, i.e., the rock surface, packed with fine grass. When the bin was filled with acorns, a grass or tule thatch was bound around it, and a kind of conical "hat" of the same material was set atop. Such bins were usually large: a woman would have to stand on the horizontal bindings in order to reach into them. When the supply within became lowered to the point of inconvenience, the owner would tear a hole in the bottom and remove the acorns through it. (M.L.)

[674] Food was rarely, if ever, stolen from [621] these granaries. Should a family run short of provisions, more acorns would be bought from someone who had plenty or, were the family really poor, the chief would see to it that they were fed.

Dress

291 The breechclout was worn by both men and women. Usually it was of deerskin, but prefer-

[171]

[157] An excellent picture of a shade of similar type is shown by Kelly (Ethnography of Surprise Valley Paiute, pl. 18, c).

[158] The Miwok "granary" shown by Kroeber (Handbook, pl. 38) has a frame work of similar type, but the Yokuts form, for at least the Central Foothill region, lacked the center post and raised conical bottom.

1: Gayton E-5 (1925-1930) 1948 NS29 Tokuts NS29

[P. 145b] Western Mono NS25

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103
131
361

Wobonuch sites:
14. sui´nawe
15. suina´weta mapa´dowɨn: suinawe junction or fork
16. paha´wet": meaning "pestle place"
17. kini´dewet": Sacata Flat
18. sasi´wet": fishing camp; given as sasi´we by D.S.
19. wiya´ma: Oak Mountain

STRUCTURES

Y
342

Dwellings.---A house was called tomo´'hɨš, and was probably hemispherical, not conical nor gabled, if my understanding of P.D.W.'s description is correct. The frame was called sutu´wɨts, the term for the material used, and was covered with a thatch, not mats, of a "brush" called ai´ač, which was tied on with ho'. This grassy "brush" had the quality of matting when wet, so it was practically waterproof. The floor was not dug out "except to make a good sleeping place" (possibly individual hollows filled with bark and tule mats). The doorway of the house was called ti´ɨač, covered with a removable door of twined aiač fastened on a frame.

[352 513]

A dome-shaped earth lodge was used by the Choinimni, according to Mayfield; his circumstantial description fills an omission in Kroeber's data and my own. This lodge was circular, excavated about two feet deep. Willow poles were abutted in the walls about six inches apart, their tips then bent inward and tied to a wood hoop. Other circular, horizontal withes were lashed around the frame. "Around and over this frame were stood tules to a depth of about ten or twelve inches. Then the soil was thrown over the tules to a depth of several inches. After a few years grass grew over the house and it looked like an underground house or cellar." The floor was covered thickly with tule mats, with extra layers at the sleeping places. Rabbitskin blankets and, if obtainable, bearskins were used as bed-coverings in winter. Save for sleeping, the house was used only in bad weather, when a fire was made in the middle of the floor, the smoke escaping directly above. Otherwise all food preparation, cooking, and eating were done outside.[6]

[352 513]

[252]

The average-sized house comfortably held a family of six. No ceremonies took place in it, though a man might dance or a flutist play if he were asked, or someone might sing. The hand game (henao´ɨša) was played there.

[533 524]

343
251

Storehouses.---Little thatched storehouses (wiči´ti: literally, little house) were built close to the dwelling. There the men of the family kept their dance regalia and their materials (sinew, hides, drills, feathers, etc.) for making various things, as well as

[6] Latta, op. cit., 22-23.

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29
[P. 146 a] Choinimi

343 small trinkets stored in baskets. Women kept
•251 extra baskets, the burden and fish baskets there, and food which was stored for immanent use.

The acorn storage bin (su'u'na) was made of twined mats of aiač tied around a stout cylindrical framework. The upper ends of the mat wefts were left untwined and, after the bin was filled, these loose tops were bunched up and tied tightly. Acorns were removed from a hand hole near the bottom which was plugged up with willow bark (or any convenient material). The bin was set up on a special platform supported by four posts or in the branches of a tree, to which it was lashed with ho'.[7]

343 Sweat house (mos).--This was the usual
515 two-post structure described for the Central Foothill region. A new one was not built until the old one burned or was beyond repair. The fire was just inside the door; so was the firewood, in two piles, one on each side of the door. Whoever was sitting nearest the wood kept up the fire.

Any male "old enough to stand it" was welcome to make use of the sweat house. There was no ceremonial dancing within it, but doctors or others who knew how would occasionally dance there (perhaps for practice, as we [533 know from the Wukchumni). The flute was often 524] played there, but games were not indulged in.

SUBSISTENCE AND CLOTHING

262 Foods.--Foods available and used were those customary with other foothill Yokuts and were procurable in abundance. Rock salt was [263] known -- probably traded from the Monachi -- but more often the salty deposit on certain grasses was flicked off on a small willow twig. Greens and bulbs, tule and iris roots were the vegetable foods besides the staple acorn. Buckeye seed was used after a thorough leaching only when acorns were scarce.

252 In discussing the preparation of acorns,
262 Mayfield says that "a sort of sieve or colander, made of fine willow shoots," was used to separate the coarse and fine particles. (This does not necessarily preclude the usual Yokuts circular winnowing tray.) The preparing and cooking of acorn foods are as reported gener[412] ally for the Yokuts. The soaproot brush with straight bristles was used for brushing up acorn flour at mortar holes.

Piñon nuts were collected and prepared as by the Waksachi (see below), eaten roasted or mashed in a rich mush.

262 Ground squirrels were smoked from their
224 burrows, but the fan used was a basket or
184 piece of hide, i.e., evidently not a feather fire fan.

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[7] Mayfield describes a similar granary (ibid., 23).

1: Gayton E-5 (1925-1930) 1948 N529 Yokuts N529
[P.154 9] Dunna

251 175 Of interest to our current ethnography is Bunnell's estimate of stored foods encountered at or near villages. I believe the quantities he mentions can be taken as typical for the entire east side of the San Joaquin Valley. These were seen in March, 1851.

251 262 175 In the Yosemite Valley (Southern Sierra Miwok) the caches in native granaries included principally acorns, also nuts of bay (California laurel), piñon pine, chinquapin, grass seeds, parched wild rye or oats, dried worms, scorched grasshoppers, and dried larvae of insects gathered from the waters of lakes "in and east of the Sierra Nevada." There were indications that dogs were eaten at feasts. "The acorns found were alone estimated at from four hundred to six hundred bushels." This was at one camp; numerous other caches were found. When José Rey's "Chowchilla" village was found on the upper San Joaquin River, nothing of value was left but the stores of acorns near by.

In exploring the region north of the San Joaquin River toward Black Ridge they came upon more stores.

> There were in the country we passed over some beautiful mountain meadows and most luxuriant forests, and some of the sloping tablelands looked like ornamental parks of an extensive domain. These oak-clad tables and ridges were the harvest fields of the San Joaquin Indians, and in their vicinity we found an occasional group of deserted huts. These, with their adjacent supplies of acorns, were at once given to the flames. The acorns found and destroyed by the scouting parties here and on the South Fork were variously estimated at from eight hundred to one thousand bushels; beside the supply of Piñon pine nuts and other supplies hoarded for future use.
>
> From the total amount of acorns estimated to have been destroyed, their supplies were comparatively small, or the number of Indians on the San Joaquin had been, as in other localities, vastly overrated.[32]

701 726 175 A few remarks are made on numbers of men. In the first engagement on a high peak up the Fresno River in January, 1851, the tribes represented were "the Chow-chilla, Chook-chan-cie, Noot-chu, Ho-nak-chee, Po-to-en-cie, Po-ho-no-chee, Kaweah and Yosemite." The number of fighting men or warriors was estimated at about five hundred. Later on "a body of Indians, numbering about two hundred" was seen on a distant mountain about to join the previous group.[33]

A participant in the same battle wrote:

> "He [Major Savage] found it was a town of the Kee-chees [the village on Battle Mountain], but that there were about one hundred and fifty

[32] Ibid., 134.

[33] Ibid., 21.

1: Gayton E-5 (1925-1930) 1948 N529 Yokuts N529
[P. 198 a] Chuckchansi

291 used a little sharp stick run through the overlapped front corners "just like a pin."

All informants said moccasins were little used; most people went barefoot (as do most children today). Moccasins were used only when walking a long distance. These were in two parts, a sole and upper, and were decorated with beads or bones which were tied on. Possibly a sandal type was known, for F.M.'s interpreter, said "Some who knew real how would make them like yours [Oxfords, i.e., a moccasin with solid upper], and some would just put straps like."

293 For dress occasions or dancing, eagle, bluejay, and woodpecker feathers were arranged around the head and neck, said J.R.

Tattooing was indulged in by Chukchansi
304 women, who so adorned the breast, abdomen, arms and legs, according to Kroeber.[85] [Inferentially, the chin was tattooed as usual.--A.H.G.]

Foods

252 Acorns.---Two accounts of the treatment of acorns were given, the first by Jack Roan with Polly Roan interpreting, the second by Nancy Wyatt, Marian and Lillian interpreting.

Acorns were picked when green; put on rocks to dry in the sun for about one week. Some were stored in sacks in the house, others in a granary covered with pine needles. At Picayune there were mostly white oak and water oak.

Black oak acorns were picked from the trees while green. Green acorns can be peeled, whereas ripe ones must be cracked. At the
[481] proper time about September, men climbed the trees and cut off the limbs.[86] Acorns fell off easily, were picked from the ground and put in commercial sacks. A barley sack holds nearly two hundred pounds. Before they had white peoples' sacks they used baskets. If a woman had no man to climb trees for her, she would do so herself. Picking acorns was an all-day job for many days, a month perhaps.

[512] Toward sundown the people went home and had their evening meal. Immediately after, the acorns were brought in and everyone in the family sat around peeling them. They would finish all they had got that day, which might yield two basketfuls. Next morning, before setting out, the women spread out the peeled acorns to dry on rocks. This procedure continued for a week or ten days; by that time the acorns on the trees were growing too ripe for peeling. Hence they were taken directly to
251 the drying rocks. When all were dried they
252 were stored, the peeled ones in sacks in the

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[85] Ibid.

[412] [86] Undoubtedly a misunderstanding: they had no wood-cutting tools. -- A.H.G.

1: Gayton E-S (1925-1930) 1948 NS29 Yokuts NS29
[P. 198 b] Chuckchansi

house, the others in outdoor granaries. [At Thrall's suggestion J.R. opined the sacks were of milkweed fibre, which I doubt. -- A.H.G.]

Now some of the new peeled acorns were dry and ready to eat. The fine skins of these were scraped off and they were taken to the bedrock mortar. As the woman pounded up acorns in the holes, she took the flour out from time to time, piling it up beside the hole. When she had a sufficient quantity she took up a handful, put it on a circular, flat, winnowing tray. The meal on the tray was then shaken in such a way that the coarse particles came to the surface, rolled off onto a similar tray. The fine flour stuck to the basket surface. The finest flour was set aside, the coarser returned for further pounding. This routine was repeated about three times with the same batch of flour. Nearly a whole day was spent at this work, producing a quantity sufficient to last an average family two or three days: "pretty near a bucket full, a little more than half a [50 lb.?] flour sack." At the end, there should not be more than a handful of coarse meal remaining in the mortar hole; this was discarded. Leaching of the flour was done at another place [near water?] where the men had already prepared a fire of manzanita wood to heat water. Cooking stones, usually of soapstone which did not crack, were piled on the fire. Meanwhile the flour had been put in a watertight basket about two feet deep and cold water stirred in to make a thin gruel. There might be two or three baskets like this. On the ground there had been made a shallow basin of earth formed both by slightly digging and by building up the sides. A half-inch layer of white sand was spread over it as a lining and packed down by pressing with a winnowing tray to prevent the flour from being carried through into the earth foundation. When this was ready, some acorn gruel was carefully poured in from a little basket. Over this were laid some small fir boughs to break the flow of water to be poured on. First some cold water was poured over the branches, then hot. The water was heated by putting in the hot stones, which first had been cleansed of ashes by dipping quickly in water. They were handled with sticks four or five feet long. Hot water was poured over the acorn gruel two or three times. The acorn food was tasted occasionally to see if the bitterness had disappeared. When cleared, the acorn flour was lifted off, the top layer (the finest which came to the top) being kept separate, as was the next, and the third or last layer. The first layer was choice, was the first cooked, was usually taken up for the men to eat at once. The rest was for general use.

The fine meal which was cooked first was put in a cooking basket and some hot water was poured over it and stirred up; the mixture was quite thin like milk. The water was boiling hot: it took three hot stones to boil a basket

1: Gayton E-5 (1925-1930) 1948 N529 Yokuts N529
[P. 179 9] Chuckchansi

252 of water. Then hot cooking stones were put in this acorn gruel to cook it; they were stirred constantly to prevent burning the bottom of the basket. This process was continued for two to three minutes. Each time a cooking stone was lifted out the mush was scraped from it to prevent waste. The gruel became thicker in cooking. When done, it was poured into three mush baskets and taken up to the house where the men of the family were waiting for it. "Men don't come around while acorn is being cooked." [Never, or only when this first of the season was being cooked? -- A.H.G.] They [264] ate it while it was hot. The whole hand within about one inch of the wrist was dipped in. It did not burn: "it was just hot enough not to burn."

Then the women cooked the second layer of meal the same way. The gruel produced was a bit thicker than the first. This mush was poured into baskets to cool and kept for eating during the next few days. When cooled it was quite stiff like cold cornmeal mush.

The third, bottom or "dirty," layer of meal was then treated. It was thrown in a basket of water; the meal floated, whereas the sand it unavoidably contained sank to the bottom. The floating meal was poured off, but even when so cleansed the third grade of meal was darker than the others. The mush produced was cooked like the rest but was even thicker and when cool was quite hard, making a sort of tough dark bread. Sometimes this thick mush was made into individual loaves by placing little mounds of it in a cold spring of water. There might be ten to twelve such mounds which, when congealed, were taken home and put away.

262 This work took all day. Meanwhile some of
512 the men had been hunting and had brought home
224 some game. "It is pretty near sundown now.
[252] Perhaps some fellow got a squirrel maybe a rabbit, a bird, or something. Whatever the meat, the men would cook it."* The women bring up the cooled acorn mush. Now it is supper time. They all eat together inside the little house."

251 When acorns were plentiful a family could
[223] get ten to twenty sacks in two or three days, said M.W. The entire family participated. White oak acorns were difficult to keep so were shelled immediately and soon used. When shelled, they were spread on flat rocks to dry, then stored in sacks which were placed on a layer of grass in the outer edge of the house. They must be kept dry. Black oak acorns were stored in their shells in granaries, but they too must remain dry.

252 Cakes of acorn meal dough were sometimes made before cooking of the whole batch was started. These were shaped in the hand and baked on hot stones. Such a stone (seen by Thrall) was about 5-1/2 inches in diameter and

*Men usually cooked meat, unless they were too busy; then the women did it.

1: Gayton E-8 (1925-1930) 1948 N529 Yokuts N529
[P. 179 b] Chuckchansi

252 2-1/2 inches thick. On one side was the cooking depression, about 3 inches in diameter. It was customary to bake these cakes and distribute them to children before the mush-cooking was undertaken.

[855]

Uncooked mush could be kept for some time, then cooked as needed. (Thrall saw a basketful on a porch at Picayune which "looked like dried putty." A similar basketful seen by Gayton looked like a mixture for an old-fashioned linseed poultice.)

251

263 Mush was often flavored by adding pulverized seeds of various kinds.

Seeds.---Seeds were parched on circular trays by adding hot coals and shaking the whole lot vigorously. To separate the coals, the seeds were then sifted through an openwork basket (xale). This, said N.W., was the same shape as the basket on which the roasting was done. The seeds were then taken to a mortar rock and pounded in a deep hole. An oil which exuded caused the seed flour to ball. The food was eaten in these balls; it kept a long time. These seeds were got in the valley.

252

[285 415]

Tarweed [seeds or leaves?] was pulverized and eaten dry that way, or added to manzanita cider for flavoring. Never was it used to flavor acorn mush. When eaten dry it tended to blow about, causing one to choke. (All present laughed at the informant's description of this.) The tarweed preferred bloomed in July; it "smelled good and was good food." Emma Pumpkin gathered a sackful this summer (1938).

[263]

Wild oats grew abundantly in the Coarse Gold region, said J.R. The women gather these seeds in seedbeaters, throwing the grain over their shoulders into burden baskets hung on their backs. Old women worked every day at this; it took about one day to fill the burden basket. The seeds were laid out on rocks to dry; when the husks were ready to drop off they were winnowed. To prepare these seeds for eating, they were roasted on a basket with hot coals, the coals later being sifted out by means of another basket. The parched seeds were then pounded in a bedrock mortar into a flour somewhat finer than cornmeal. The flour was mixed with water, then shaped as small thin biscuits. These were cooked in hot ashes, closely watched to prevent burning. Such cakes were eaten cold or hot, or laid away for the next meal. They were a favorite accompaniment to manzanita cider.

222 252 252

A "grass" grows down toward the valley which "blooms red on the end" and produces fine black seeds. These are ripe in late summer (July-August).[86] The plants were pulled up, roots and all, and laid out to dry. The seeds dropped off; those that failed to were stripped off and the grass thrown away. The seeds were brought home, stored in the storehouse.

222

[251]

[86] Probably the "kasin" seeds prized by other Yokuts, though this date is a little late for their ripening.

[i.e. lots of acorn meal dough. -Barbyst]

252 262 Greens.---Clover leaves, young and tender, were eaten in the early spring, said J.R. They were eaten alone or as an accompaniment to acorn mush or manzanita cider. Clover was never dried.

Roots.---Not many roots were eaten, said J.R. Of this type of food the so-called "wild potato" was most abundant and favored. In the [222 spring, when the grass was just beginning to turn yellow, women went out to dig these roots. The season lasted about two weeks, for soon after the roots ripen the ground becomes too hard to break. They grow about three inches underground, are a little larger than one's thumb; the plants do not look like a potato plant. [Probably the Eulophus. -- A.H.G.] The roots were laid out on rocks to dry [251 thoroughly, then stored for winter. They were hung up in the storehouse in containers, as they spoil if allowed to get damp. They were boiled in water and mashed when eaten: "they taste just like potatoes."

Berries and fruits.---Elderberries were eaten, said J.R. A larger and sweeter type [222 was got up in the mountains when they went up for pine nuts. They were gathered, dried on 251] rocks up there, and brought home. They were boiled and eaten about once a week during the winter. They were never mashed. Dried berries kept a long time.

Thimbleberries[89] were picked when ripe and eaten at once, never dried. They were picked into an ordinary seedbeater held in the left hand.

Gooseberries which grow locally are very thorny, but a better, less spiny kind grows up in the mountain, larger and juicier. They turn red when ripening, and when brownish but not [251 yet black are ready to eat. They were consumed at once, never dried. They are J.R.'s favorite berry.

Wild grapes were eaten, but never dried. [272 Sometimes the fruit was crushed, producing a red juice which was drunk at once.

Nuts.---Nuts of the sugar pine were got around Coarse Gold, said J.R., but most came [221 from higher up in the mountains. The nuts were 222] ready about August, and whole families went up there to camp. Hazelnuts and a fine quality of elderberry were got at the same time. Deer meat was also enjoyed then.

[222 When the pine nuts were ripe, men climbed 48] the trees, knocked down the cones, while the women below collected them in piles. Pine needles were laid around the piles and ignited to burn off the pitch. When cool, the cones were split open by setting them butt down on a rock and striking the tip with a heavy stone. They split into about three sections and the [137

[89] A red berry a little larger than a man's thumbnail, growing on a bush 3 to 4 feet high, the leaves the size of one's hand, the stems finger thick. The berries are not round (spherical?), are thinner than strawberries, grow in clusters at the ends of the bush and are easily picked; "something like a raspberry."

252 nuts fell out. The nuts were gathered up and carried home in burden baskets. The nuts to be
262 eaten were first parched with coals on a basket tray. Care was needed to prevent scorching. Sometimes, after being cooked, they were pounded in a mortar hole, the greasy mass then being rolled into balls and eaten as an accompaniment to acorn mush.

[222 481] According to N.W., when pine nuts were wanted men climbed the trees and twisted them off; today they cut them off with a rock [sic]. Ripe cones, probably those left beyond reach, shed their nuts on the ground. The whole cones were set on the fire to burn off the pitch. Then their "leaves" were knocked off to get out the nuts. Good nuts are brown at one end; [284 286] those black all over are "no good." The nuts were kept in sacks made of milkweed string. They were shelled as needed, eaten directly, or pounded and mashed into balls to eat with acorn mush.

[439] This year N.W. climbed trees and got pine nuts. Sometimes these are sold to visitors at the hotel in Coarse Gold.

262 Meat.--The meats commonly eaten were gray squirrel, ground squirrel, gopher, jack- and cottontail rabbits, fox, wildcat, and deer, said J.R. Gopher snakes, but not rattlesnakes, were eaten.

Bear meat was eaten by some, but others thought bear "too human." "He lies down just like a man when he is dead, has breath like a man." Moreover, bears sometimes killed and ate men; hence, a bear, having possibly done this, was not fit to eat. This was the Chukchansi attitude.

Meat definitely not eaten was that of eagle, buzzard, chicken hawk, coyote, and dog. [184] However, J.R. said that to the south the valley Yokuts ate dog meat.[90] Elk was not eaten by Chukchansi, since it was not available, nor was buffalo (sic; antelope?).

Horse meat was eaten in the old days. Men would go to the valley. They made a gear of wood[91] which was put on a horse's nose. Then the captor would jump on its back, without saddle or blanket, and bring his prize up here. Some people kept horses to ride; others, after getting them here, shot them through the heart with an arrow to provide food.

252 Meat was roasted on coals; was never cooked in a basket. Deer meat was cut in pieces about twelve inches square. As it swelled during cooking, it was punctured with sharp sticks "to let the steam out so it won't burst."

● 251 Meat cut in strips was hung over a pole to dry into jerky. It was turned every two or

[90] This bears out the statement of a neighboring Kechayi, that dog meat was not eaten, while an eyewitness saw it eaten farther south (cf. Gayton, Ghost Dance of 1870, 72, and Estudillo among the Yokuts, 75).

[91] Not identified. The shrub grows around Coarse Gold, "it won't break -- is just like leather."

three days. Fish was treated the same way. Any kind of meat could be dried, said J.R., and would keep for two or three months.

Grasshoppers, a wingless type, were got in the plain of the valley. They were caught by setting a fire in a circle, driving it inward. When the grass was burned over, the grasshoppers, killed but not cooked, were collected. Taken home, they were roasted on a tray with live coals.

Angleworms were got in winter and cooked in a soapstone dish. A little water was added, "just enough to make a little gravy." Some people dried angleworms to keep for later use, a practice which J.R. and P.R. both decried.

Grubs of a small black butterfly[92] were also cooked in a soapstone dish with a little hot water; they were not cooked long. These were usually dried on trays in the sun and stored in sacks for later use.

Yellowjacket grubs were dug from the ground after the live insects had been smoked out. Dried weeds were stuffed in their holes, lighted, and blown upon. The holes were about two inches across, the nests some twelve inches below the surface. A number of holes indicated many nests. The grubs were cooked in ashes, then sifted from the ashes in an open-twined basket.

Salt.---Salt was not always available to the Chukchansi. Their supply came from the Paiute (probably Eastern Mono) of Nevada who came over about once a year to trade and even then did not always bring it. J.R. did not know where they obtained it. The salt was paid for either by bead money or by baskets. If the payment was a basket, this receptacle would be slightly larger than the lump of salt for which it was exchanged. The basket, however, was thought to be the more valuable because of its durability: "it holds water, lasts a long time; it may look old but it will still hold water a long time." For a piece of salt say four by six inches, not many beads were paid; roughly, it would be about 50 cents in American money.

The salt so obtained was mixed with water, "just enough to stick it together," and put on ashes to heat, left overnight. When taken out it was hard, "just like some kind of rock." When struck, it broke in little pieces. The flavor, however, was changed by the treatment: "it was kind of weak, you know, not like it was before the burning."

According to N.W., rock salt was got from the Eastern Mono who lived "the other side of Tuolumne, down Mono Lake way." They brought it from "the other side of Seventy-Seven, Basalt Meadow." They brought crystals about one-half

[92] These are grubs of a small black butterfly which does not come every year; there were none this year (1938) but they were plentiful in 1936. They come very early in the spring on trees where new leaves are budding. [Possibly a moth? -- A.H.G.]

1: Gayton E-5 (1925-1930) 1948 N529 Yokuts N529
[P. 182a] Chuckchansi

scrape the berries into piles; then, dust and all, she put them in a basket.[95] The dust was said to prevent stickiness and dripping while the berries were being handled. The berries were winnowed by being tossed on the same basket, freed of leaves and twigs that fell with them, and taken back to the temporary camp in a burden basket. There they were again picked over for further cleaning and spread on rocks to dry.

When dried the berries were mashed on a special type of stone, thin, flat, and a bit wider than one's hand. The fruit was mashed, not pounded, to loosen the seeds from the skin and dried pulp. The mashing took all day. Then the mass was put on a sieve basket which permitted the seeds to fall through; they were discarded. The desirable part was sacked and taken back to the home village where it was stored in a dry spot. This activity continued for about one week up in the mountains.

When cider was wanted three or four handfuls of the berries were put in a watertight basket about one foot deep. [illegible] they had soaked a while they were squ[illegible]ith the hands to extract all the dried juices. A sieve basket was then set over the top of a larger watertight basket and the liquor and berries poured in. When the pulp was well drained, more clear cold water was poured over it very slowly. Then the liquid was ready to drink: there was a basket about one foot high, full of cider for the family.

Grapejuice, red in color, was made from crushed wild grapes and drunk at once, said J.R.

A tea was made of "peppermint," the regular mint plant, said N.W., which grew wild. The leaves were gathered, spread on a flat basket to dry. The dried leaves were crushed by hand and stored in a covered basket. Sometimes the plants were dried, then tied in bundles up in the house roof. When wanted, a piece was broken off and put in water. Mike Wyatt said he thought this tea was not a native beverage, although it was made when his people were still living in native-type houses.

A drink which J.R. called dowunnil was first used by the Indians when tortillas were introduced, which was a long time ago (about 1840-1850). It was thought to be "good for something in the stomach." The plant was dried and hung up in an undisturbed spot as the leaves dropped off too readily. A few leaves were taken when wanted and put in water. [This sounds remarkably like the "peppermint tea" described by N.W. The cooling effect of the mint might have been desirable with the strange tortillas. -- A.H.G.]

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[95] The basket was described as 3 feet long and 1 foot wide, but this does not fit any known Yokuts basket type. It may have been an extremely elongated twined basket of the seedbeater type. -- A.H.G.

226 four or five men. [No mention was made of a first salmon ceremony, but this may be what the informant, J.R., had in mind. -- A.H.G.]

252 The fish were dried at the camp. The im-
251 plication is that men did all the work connected with salmon fishing, but it was not so stated. The fish were cleaned by slitting full length down to the backbone. For better drying, the flesh would be slit again so the sections would be thinner. As a supporting rack, slender sticks were laid across the lower limbs of trees or sturdy bushes. The fish were hung horizontally on these, the flesh hanging down each side. They were frequently turned around so the sun got at all parts. They were put in [485] a sack [skin?] and packed home with a tumpline. A man carried about two hundred pounds of fish. At home, the fish were taken out and hung on sticks across the roof of the storehouse, so they would not spoil. Such dried salmon were eaten before they got too dry: "they don't keep all winter," said J.R.

226 Creek fish, trout, were stupefied with the
278 leaves of a plant called s'ikahi that grows in the lower foothills. The bush is six to eight feet tall, has leaves round and a bit larger than elderberry leaves. These were pounded, mixed with mud, and tossed on the water of pools. "It makes the fish sick. It kills them." But it did not affect the quality or flavor of the food: "it doesn't get into the meat." When the fish come to the surface, "everybody" came out with baskets and dipped them up. "You get the basket right under them, throw them out." Sometimes men and women caught them with their hand [presumably when the fish were stupefied, not by underwater diving as described for more southerly Yokuts].

These fish were small, three to four inches. They were cooked in hot ashes (not [25] coals), which cooks but does not burn them. 252 Some fish were eaten at once, for supper, but the majority were dried for later use.

251 In preparation for drying they might be cooked first or not [perhaps depending on weather conditions], though usually they were not. When drying, they were laid out [cleaned?] on flat rocks and took two or three days to dry. "They are dry just like a cracker." As much as half a sack of these would be put away by a family for winter consumption. Enough for a
252 meal was taken out, cooked in ashes, and then
251 pounded up to be eaten with acorn mush. "They are a little bitter, not much, when you eat them." said J.R. [There was a suggestion, not clearly stated, that fish meat was dried, pounded, and put away like pemmican.]

226 In Chukchansi territory Powers saw fish weirs with inserted traps into which the fish were driven from upstream by means of a brush sweep like that of the Wobonuch (see below). The Chukchansi also speared fish from a booth

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29
[P. 1879] Chuckchansi

361 these were built with the doors facing each other.

342 The whole family was concerned with construction of a new house. The men secured the poles, dug the holes for them with digging [462] sticks and set them up, while the women got the tarweed, string, and bark [sic], and did the thatching.

343 The ramada or shade as an adjunct to individual village houses was not described by any informants, though it was mentioned in passing. Presumably it was used by the Chukchansi as by other Yokuts tribes.

344 On the meadow near J.R.'s present (1938) home there was at one time a large communal shade of the type constructed to enclose a dance space and shelter the audience. This J.R. said was "just like a corral," which would imply that it had a back wall as well as a roof. One of the Ghost Dances was held at that place. People played games there, made cider, and cooked. This enclosure would accommodate four to five hundred persons, said J.R. When so many people were assembled and eating, "the women would be doing something, preparing food all the time."[102]

343 Storehouses and granaries.---A special storehouse, structurally like a dwelling house, ● 251 was built near the family home. One such storehouse might serve two or three adjacent houses occupied by related families. These storehouses had a conical frame, up to 6 feet in diameter at the base, and 7 or 8 feet high at the peak. [The walls were not described, but presumably they were of a thatch with bark overlaid: a dry interior was essential.] A bark door covered the entrance "to keep the wind and rain out, so things will keep dry all winter." The floor was covered with a thick layer of dessicated grass, weeds, or boughs, and on this the stuffed storage sacks were laid. "The heavy sacks were laid down, and the light things hung up." Salmon was hung on cross-poles, but jerked deer meat was stored in [skin] sacks. The meat and fish were taken out and examined from time to time for worms, bugs, or decay; contaminated portions were discarded.

251 It was not considered good practice to pile up too much stored food as it was awkward to handle and encouraged decay. Only enough food for one meal was removed at a time from the storehouse.

The supply of food in such a storehouse was expected to serve at least one family throughout the winter. A large family with 251 many children would be tided over lean periods 222 by their neighbors, should their food become 224 exhausted. Even in winter men went out to hunt every day, and women found late seeds, or some

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[102] Neither the number nor the activity is exaggerated if we are to judge by accounts of other Yokuts assemblages (Gayton, Estudillo, 74); Powers (p. 385) estimated "about 300" at the Chukchansi ceremony he witnessed.

251 222 224 which had been overlooked, to add to the stored supply.

Some years the seed and berry crop was 261 scarce. Under famine conditions, when food was 731 actually all gone, people warmed water and drank it. [J.R. did not state when or how often famines occurred; presumably very seldom. -- A.H.G.]

343 Each family had an acorn granary. These were constructed by sinking four posts about 2 feet into the earth, allowing them to extend 8 to 10 feet above. On the ground, and up to about 2 feet, was piled and packed brush or grass to form a nestlike base for the acorns. The walls were of "worm wood" (mesini) stalks of finger thickness. The butts of the stalks were embedded in the fibrous base mass and then twined with cord (s'atip) in paired horizontal bands with space between, thus forming a circular wall. As the granary was built, it was filled. This stretched the walls, which were 3 to 4 feet in diameter. Since the wall stalks were not as long as the frame posts, upper sections of the twined wall were added as needed. When the granary was full, pine [or cedar?] bark was laid on top and weighted down with a couple of heavy stones. To protect the sides from rain, strips of old bark were tied around it. Normally a granary was built in a sunny dry place, as near the owner's house as possible, as the one thing feared for acorns [784] was dampness. To prevent moulding, three buckeye balls were always laid in with the acorns. It was said by the informant N.W. that squirrels, rats, and other rodents never entered.

251 The average granary held ten to twenty sacks [native or modern?] of acorns; N.W. had 343 one once which held twenty sacks. To reach the acorns at first, three people were needed: one who climbed on top, one clinging to the sides, and one on the ground. No ladder was used; the [417] woman owner climbed up the sides by means of the woven walls. As the supply diminished, the upper wall sections were removed. The contents of such a granary might last two years.

Each family had its own granary, which was used and repaired indefinitely. If it got wet within during the winter, a new one was built, the acorns dried and restored. The damp granary would be repaired or not, after summer drying, just as the owner might wish. [N.W. did [462] not state whether men or women built granaries; perhaps men sank the frame posts, women did the twined side wall. Once built, it is evident that it was a woman's responsibility, if not personal possession. -- A.H.G.] Acorns of 251 black oak were stored without shelling, and dried in the open airy granary before bark was tied round it. White oak acorns were shelled, dried, and put away in sacks in the dwelling or storehouse to protect them from moisture. N.W. still gathers acorns (1938), and has about six sacks in her attic which she had kept three years.

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29
LP. 188 9] Chuckchansi

343 J.R. described a granary covered with pine needles which shed water; the top was covered.
251 The contents remained dry all winter. To get at the acorns a little hole was poked at the bottom which allowed them to drop into a sack
[171] or basket. This type of granary was used here (Chukchansi) and at Awa'ni· (Miwok).

MANUFACTURES AND UTENSILS

265 Baskets.---The following basket types were described and named by the informants N.W. and J.R. Cooking baskets (soiyun) were from 1 to 2 feet deep. Gift and washing baskets ('tewis) for the Mourning Ceremony were about 2 feet in diameter at the bottom, 3 feet in diameter at the top, about 3 feet deep. Small basket for pouring washing water (k'olis 'tewis) was said to be the same shape as the big basket. Winnowing trays (po'o'yi) were flat, circular. Burden baskets were 3 to 4 feet deep, of conical shape; carried by means of a tumpline 2 inches wide. Seedbeaters were about 10 inches across at widest part of their oval, four inches deep, and had a little handle.

Several Chukchansi objects appear in plate 1, Part I, which shows a Yokuts ethnographic collection at the Peabody Museum of Harvard University. These are the bowl-shaped coiled basket with feather and red wool orna--mentation (toward upper right, second from top);
[272] the open boldly striped twine basket (left center) which was a strainer used when making manzanita cider.

525 Also Chukchansi are the six gambling sticks (bottom center) and the two pairs of hand-game bones lying at the tips of the Chukchansi arrows (bottom horizontal).

352 Cradles.---In N.W.'s house there is a grand-
854 son, Kenneth, about eight months old (1938). All the following information was derived from that situation, N.W. speaking, Lillian, the infant's mother, interpreting.

A baby's first cradle was not made until it was born "so they would know how big to make it." The work was done by the paternal grandmother. It took N.W. three days to make K.W.'s cradle, which is described below.

The first cradle was about 20 to 26 inches long, the back being a stiff twined frame, just as for the later cradles. The foundation was a single layer of sourberry-bush roots, twined with strips of roots of a water plant.[103] The horizontal twining was in groups of three rows. The foot end was left unfinished or covered
[824 with a piece of soft hide. The whole cradle
284] was edged with a chaparral brush (Ceanothus?) binding, bound on with monoxil.[104]

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[103] Roots of a river plant with sharp edges like grass, but no flower (carex?).

[104] A plant with purple flowers which "grows north some place" (redbud?).

W [illegible] NS 25
Y

342 port with ropes. Against these were laid slabs of cedar bark which were tied to the frame at convenient or necessary intervals. Earth was thrown up around the base to hold the slabs in place and to prevent water from running in. Although the bark was hard to get, as cedar grows only up in the higher mountains, it was not bought from the tribes of the Western Mono, living at higher altitudes, or from the Eastern Mono traders.

W Y 343 Shades (ci´nu'ăš) were used only during the summer, when one was put up in front of nearly every home. The construction was a simple affair of four forked corner posts, four tie beams connecting these with transverse beams on which leafy willow boughs were laid. W Y [574] All cooking, eating, and lounging were done there. When visitors were expected for a ceremony, long rows of shades were erected for their shelter. On these, back walls were sometimes added against wind or rain, They also served as shades for spectators at the ceremony.

W Y 343 Storehouses.---The Michahai, like the Yokuts of the valley, may have used a small house for storage. (The Waksachi did not.) Here extra baskets, foodstuffs, hunting and fishing equipment, etc., were kept.

251 Storage bins.---Two types were described by S.O. and B.O.; both were called suna''ăts in Michahai. For the first, and apparently the most common, about six stakes, approximately about 10 feet long, were driven in the ground in a circle about 3 feet in diameter. Small willows were cut an even length and twined, top and bottom, into a long mat or strip. One end of this was fastened to one of the stakes, and the whole wound around all the stakes. A packing of leaves was filled in on the ground, and acorns thrown in on it. As the space filled, another turn of the mat was taken around the stake frame. It was about 8 feet high when finished. To fill the upper levels, and also to get out acorns, a woman stood on a forked stick "ladder" propped firmly against the side of the bin. To top off the bin, a conical cover of twined grass was fitted on and tied down. As the contents of the bin lowered, the upper turns of the mat were removed.

When S.O. was talking of this type of bin, he claimed that the wall was formed of a single mat, some 3 to 4 feet deep, wound once around the frame. Sometimes this mat was held upright in a cylindrical form by having horizontal withes tied around it. These bins could then be picked up and carried to some preferred location, usually to the top of a flat rock, for dryness was essential in keeping the acorns: "a woman might have from three to several of these on one rock." The bottom was filled with grass, the acorns filled in, another layer of grass put in, and the whole topped off with a conical cap of grass thatch.

A storage bin close to home was made on a raised framework. A forked post some 6 feet

W Y 343 25

high was set up, and in a squared position about it were erected four shorter forked posts. Four tie beams connected the corners, and across these was laid a flooring of small logs. Side poles, whose butts rested on the outer edges of the floor, leaned into the forked center post. All poles were lashed in place, and over them was wrapped a grass thatching, similar to that used on houses. How this type of bin was filled and emptied was not learned.

In such bins only acorns were kept. Seeds were stored in special baskets in the house or were put in skin sacks and buried under sheltering rocks. Piñon nuts were stored in buried sacks, made of antelope and deer hides cured with the fur on. The leg parts of the skin were cut off; the skin was folded down the back and sewed up around the edge with sinew thread. An opening, left at the neck, was closed by a tie string. These sacks were often hung from trees, as the hair shed water, making them practically waterproof. They were also used as general carryalls by men.

W Y 343

Sweat house.--This structure (mos, Michahair; mo·sa or mosa´owi, Waksachi) might be made with one or two center posts. B.O. said the two-post type was preferred by the Waksachi, whereas, according to S.O., the single-post type was the common form for both Waksachi and Michahai.

The posts of the two-post type were about fifteen feet apart, and a long gable beam rested in their forks. Long poles, lying as close together as possible, were leaned against the center beam, and into and around the forks of the two uprights. Then brush, willows, and "long weeds" were laid against these, commencing at the bottom and working up. Earth was taken from the interior and piled over the brush cover as it was laid on. In the side of the structure facing the water [Eshom Creek for the one described here] a door space had been left between the side poles. Three upright stakes were driven in the ground on each side of the door space, just within the entrance, so that a log resting upon them was flush with the slanting side poles of the frame. On this log rested the butts of short poles, their tips against the center beam, thus filling in the space above the doorway. The height of the entrance was about three feet, and the interior of the house not quite high enough for an averaged-sized man to stand erect. There was no closure for the entrance.

W Y 343 515

Two "brush" fires were built, one on each side of the doorway; the draft pulled the fires' heat inwards, it was claimed. Whoever wanted to sweat would get the necessary fuel. The room held ten or twelve men. While any man was free to enter and make use of the sweat house, boys were not permitted to try sweating until they were fifteen to twenty years of age. The prohibition was due to their lack of mature physical soundness, not to any sense of ex-

W Y 222 262 Yucca---The yucca plants (o·'pa°dra, Waksachi) which grow on the mountains to the south and east of Eshom Valley (on Carpenter's Hill, B.O.)[163] were secured for food. In the fall men from Eshom Valley, mostly Waksachi, went up to dig up the roots which they brought back to roast. In the spring they again went up to break down with hooked sticks (po'dos) the tall blossom buds (o'b¹) and returned with Y W [252] them in back-packs. At home they were cut into 18-inch lengths, and laid on a large coal fire. As the stems cooked, they were turned with a long pole. When removed from the fire, the exteriors were caked with a hard ashlike substance which was scraped off. Then the pieces were split open and the tough pulp of the interior was chewed to extract the sweet juice and the pulp was spat out. The whole process W Y [462] of gathering and cooking was men's work; one fire served for the group who divided up the yucca after it was cooked. B.O. said the [251] cooked food was often dried, pounded up, and stored for winter use.

Piñon nuts---Pine nuts (pone'diw°, Waksachi) were obtained in the hills east of Eshom Valley, near Ox Springs. Waksachi and Patwisha families went camping there to get them in the late summer (August-September). A long pole Y W with a shorter one tied to it at an angle made [481] a strong hook with which the men hoisted themselves into the trees and hooked and knocked down cones. The cones were full grown but still in a "green" or unopened state.

W Y 262 252 At the camp the cones were piled on a big fire of coals and turned with long poles until their exteriors were burned and ashy. Removed, they were piled in a big heap where they steamed as they cooled. Sometimes the cones were taken home, but more often the nuts were extracted on the spot. This was done by holding a cone butt down on a basket tray. With an obsidian blade the tip end was cleft four ways; the outside of the cone could then be stripped down in sections by hand. This let all the nuts drop out on the basket. Occasionally the W Y nuts too were cracked on the spot and only the meats taken home.

[439] Piñon nuts from Owen's Valley, brought over for trade by the Eastern Mono were called te'°wa. They were superior to the local variety.

W Y 222 262 [462] [251] Acorns---Pine groves of black oaks grew on the floor and slopes of Eshom Valley. It was the men's task to knock down the acorns while they were still slightly green; this was accomplished by means of the wooden hooks used also for piñones and cactus. The women picked them up and carried them home in burden baskets. All returned home in midafternoon. Everyone in the family assisted with shelling the nuts, which were shelled before being stored in the W Y 262 252 house. Sometimes one person would crack them and another do the shelling. For cracking, the

[163] Probably also on Cactus Mountain.

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29

[P. 223 a] Western Mono NS25

W Y 250 262 nut was held butt down on a small flat stone and struck on the tip with another stone. A man would not hesitate to use his arrowstraightener for such a purpose, though other comfortable hand-shaped stones were kept about and so used. The shelled acorns were spread out on W Y rocks to dry, then stored in large covered [251] baskets in the house. Acorns to be stored in outdoor bins were not shelled. Acorn-shelling was a favorite evening occupation while some old person would tell stories.

Acorn mush.---The process of cooking was the usual one with hot stones. The stones were Y of a dull brownish color, hard and fine grained; W granite was never used. The mush basket was [285] always twined and invariably carried four horizontal rows of redbud ornamentation (pl. 2, b herein). The hot stones were lifted from the fire with two pine poles, dipped quickly into water to rinse (if ashes adhered, which they rarely did), and dropped into the mush. They were extracted from the mush with a looped mushstirrer made of grapevine.

If people were in some hurry to eat, the whole basket of boiling mush was set into a larger one filled with cold water. If they were in a great hurry, portions of mush were scooped up in individual baskets or clay bowls and lowered into cold water where they immediately solidified. These agglutinated cakes were removed from the water and served from a Y big tray. They were eaten "just that way." W

A plant called paš was used to flavor [263] acorn much.

Ya''ap.---This was a root (unidentified) about 1 to 2 inches long and 2 or 3 inches wide. It was boiled, or baked in ashes, and was sweet, mealy, and fragrant.

Yellowjacket nest.---This was dug up, roasted on a hardwood grating laid over coals, cooled, broken up, and eaten.

W Honey.---A bee (?) called in English "big Y stick bee" (ta'beko'ot, Waksachi) deposited honey all over a tree -- in its crevices, forks, [237] or splits in the bark. This honey, while sticky, was sufficiently firm to be cut away in small pieces. An obsidian blade was used, and pieces obtained might be as large as a man's middle finger. The honey was taken back to camp on leaves, or in a leaf-lined basket, and was eaten immediately "just like candy." B.O. insisted that this was "old time" and that the bees did not come from Spanish sources.

Fish.---These were usually roasted between two layers of hot coals; the bottom layer was covered with sand. Occasionally they were boiled in a pot, but were less favored when so cooked.

Shellfish.---The only type known for eating was the freshwater oyster (river mussel). When whole, with meat inside, it was called ki'puš; the shell itself, which was burned to combine with tobacco, was known as ke'wi. As a food the oysters were used only by the people near Wood-

2: Kroeber E-5 (ca. 1918) 1953
NS29 Yokuts NS29.

YOKUTS PLANT FOODS AND THEIR PREPARATION.

252 262 The buckeye process, which was probably similar to usages elsewhere in the State, was the following: The nuts were broken with a stone and soaked in water for a day. Next, the kernels were crushed to powder with the pestle. The last step was the extraction of the poison, which was done in the acorn-leaching place by the creek. Each time the flour dried a stick was laid aside; the pourings were so timed that the tenth stick was taken as the sun was nearly setting. The woman then cooked the flourlike acorn mush, and it was usually consumed on the spot.

The digger pine nut was not only eaten whole and raw but often treated like small seeds, being winnowed in a scoop-shaped basket, pounded into flour, and cooked. [251 343]

Acorn granaries were of Miwok and Maidu type. There is no record of their occurrence south of the Yokuts.

[415 327] Small shallow cook pots of soft stone, perhaps steatite, though described as reddish, were used by the Chukchansi and no doubt irregularly by other tribes who had access to a suitable supply of material. They were dug out with quartz. *Kuyati* and *kulosun* grubs, and angleworms, were perhaps stewed in these vessels, or more likely fried in their own fat at the edge of the fire.

[415 177] The paddle for stirring boiling acorn mush is not a Yokuts implement, the central Miwok being the most southerly group among whom it makes its regular appearance until southern California is reached. The Yokuts substitute a stick looped on itself, a less efficient stirrer but more serviceable for removing the cooking stones, and far more readily made. (Fig. 38.)

THE MORTAR.

412 The mortar was a pit in an outcrop of granite, used until the depth of the hole became inconvenient. A convenient exposure of bedrock near a village often contains dozens of holes in all stages of wear within a few yards. (Pl. 45.) Poles leaned together with brush thrown on made an arbor under which a group of women would work for hours, gossiping or singing. Their pestles were often left on the spot; they are rude, irregular, with little taper, and somewhat oval in cross section, even with one or two sides flat or concave; in fact, little more than longish river bowlders, somewhat shaped, partly by pecking with the edge of a flat cobble, and in part by continued usage.

On the alluvial plains portable mortars were necessary. The most common form of these among the Tachi was one of white oak. The flat-bottomed wooden block was little more than a foot high, half

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

direction is not given. We can only reason that it must have been to the southeast. Nearby was "the rancherie of *Malim*."

From these last places Pico "traveled south of the Tulare about eight leagues and turned eastward to the San Joaquin River." This statement does much to fix Pico's position. So far he had been west of Salt, Santa Rita, and/or Hildreth Sloughs. If he first attacked a village near the present Santa Rita Rancho Headquarters, he would now be in the vicinity of Poso Farm near present Firebaugh. Across the river Pico saw several Indian settlements, which he did not name.

From this last location Pico sent "Corporal Juarez with ten men to reconnoiter around the Rancherie called Aopicha. We then traveled south easterly and came upon eleven horses at the river bend where the San Joaquin and the San Jose meet," recorded Pico. This is definitely the present Mendota Dam site. "They belonged to the Tape Rancherie close by." *Tape* was undoubtedly the Indian name of the later notorious *mestizo* village of Las Juntas.

This same night sixty-five head of horses were stolen back from Pico by surrounding Indians. Sergeants Juarez, Olivera and Arroyo were sent out with ten men "to hunt them up." Juarez recovered thirty-eight horses and reported having seen horse tracks "entering the draw [Big Panoche Pass—?] in the direction of Solidad."

Wrote Pico about Tape, or Te-pe, as it was called by the Indians, "Here we captured three old gentile men and a Santa Cruz christian besides eight old women. Here we found 238 slaughtered horses with immense quantities of boiled jerky, and 16 live horses, some tame and wounded with arrows and in poor flesh. Most of these stock belonged to San Juan mission."

In checking the above Indian names with those furnished by Pahmit, it will be noticed that only one name is similar in both accounts, the Ah-pe'-che of Pahmit, and Pico's Aopicha. We have definite information about the Apaiche who were referred to by Pahmit and who once lived near present Helm. This is undoubtedly the tribe referred to by Pico, or one of their villages.

Having been born on the bank of the Orestimba Creek in western Stanislaus County, I have always been interested in the derivation of that name, but it was not until the summer of 1930 that this information was forth-coming. It was obtained

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

tendencies. It is entirely in keeping with what is known of primitive cultures that this should be characteristic of a plains people. Only one who has been afoot upon the broad San Joaquin Plains before the days of well water can appreciate the tremendous importance of a horse to such people.

During the time when salmon were running they undoubtedly stored up considerable supplies of the dried flesh of these fish and it is probable that they had permanent villages upon the eastern bank of the San Joaquin River, where fishing was carried on at all times.

From the San Joaquin River to the Sierra foothills was a distance of about thirty miles, all of which was dry and barren plains that made quite difficult the problem of gathering and transporting acorns during the season in which they were ripe.

The antelope surround was probably a regular practice among these people, as was quite likely also the jack rabbit drive. Consequently the plains tribes used rabbit and antelope skins to a considerable extent. Their equipment was of a more mobile nature than that of the river tribes, but was constructed of materials somewhat similar.

The plains lying between the San Joaquin River and the Sierra foothills were roamed by countless antelope. There were many elk along the river. But the hunting of these animals was a very uncertain venture when the hunter was afoot. There was no more valuable aid for which the Chauchila Indians might have wished than a horse. As a consequence, when the Spanish first came with horses and when the American explorers and settlers arrived, they soon came to call these people "the horse-thief Indians."

The following quotation from Frémont's *Memoirs* will give the reader a definite idea of the behavior of these people. This account shows very clearly how similar in behavior were the plains people of the San Joaquin to those of the Great Plains of the middle west:

"December 19, 1845. In a few hours we reached a beautiful country of undulating upland, openly wooded with oaks, principally evergreen, and watered with small streams which together make the *Mariposas* River.

"Continuing along we came upon broad and deeply-worn trails which had been freshly traveled by large bands of horses, apparently coming from the San Joaquin Valley. But we heard enough to know that they came from the settlements on

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Yowlumne

A few Yowlumne traders traveled to what is now Inyo County to trade for mineral salt, and for obsidian, the volcanic glass used in making arrow and spear points. They also traveled to the West Side to trade for asphaltum from the deposits near present Maricopa and McKittrick. Some venturesome traders traveled to the coast near Moro Bay to trade for abalone, Pismo clam, keyhole limpet, and periwinkle shells, from which some of their ornaments and money were made.

Many kinds of herbs, roots and seeds in addition to saltweed ashes and salt from salt grass, were traded, but to a limited extent, because the growth of most herbs and roots was wide-spread in the San Joaquin Valley. Dried wild blackberries were traded to the people who lived on the plains and lake shores away from the rivers, where those berries grew in abundance.

Yowlumne traders traveled as far north as *Yokohl* Valley, northeast of present Lindsay, to trade for steatite, or soapstone, from which were made their cooking vessels and one variety of bead money. Chalcedony, jasper, agate, and any other stone which was easily chipped into arrow points was also valued very highly. Rare curios or oddities of any kind had a high trade value. Quartz crystals, star-fish, sea urchins, cowrie shells, the canine teeth of grizzly bears, and any other uncommon objects, were certain of a ready market by trade.

To fully explain Yokuts trading and trade routes would require more space than is available for this entire article. But it is necessary to know at least something of this practice, which, because of the low mountain passes to both east and west, was probably more extensive among the Yowlumne than it was among most other Yokuts tribes.

According to old Yowlumne Indians, elk, deer and antelope skins, steatite and the salt from native salt grass were the local key articles of trade. They were scarce in much of the desert territory east of the Sierra.

Yowlumne traders would gather a pack of tanned skins, purchasing them with Yokuts money, and carry them to the desert, where there were deposits of obsidian, or volcanic glass. As there existed a set standard of values between deer skins and obsidian, it required only a short period of visiting, news exchange, and bartering before the Yowlumne trader was ready to return to his home on Kern River.

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YOKUTS HOUSEKEEPING

115 Regarding the interior arrangement of Indian houses, we are indebted principally to T. J. Mayfield, a San Joaquin valley
353 pioneer who, from the time he was six years of age until he was about sixteen, between 1850 and 1862, was kept by members of the *Choinimne* tribe of Yokuts on upper Kings River. It is from his statements that the following has been taken:

354 "In the center of the single room, directly under the small circular opening at the top of the room, was a fire pit approximately two feet in diameter and excavated to a depth of from ten to twelve inches below the floor of the house. It was about half filled with rocks used in cooking. In bad weather a fire was kept in this house day and night and during that time the family cooking was done over it. At other times all food was prepared in an outside firepit and eaten outside. In fact, the house was used only for storage purposes; except during the rainy, or cold season.

352 "The floor next to the walls of Indian houses was sometimes covered to a depth of several inches by tule mats. These mats were formed by lashing a layer of tules together at intervals of twelve or fourteen inches. These mats could be rolled up like the grass matting so commonly used in pioneer white homes.

"The beds of the inmates were arranged around the fire pit, the heads being toward the wall with the feet toward the fire. In a large house this left a circular aisle several feet in width between the fire pit and the feet of the sleepers.

352 "In making a bed, a hole was excavated several inches into the floor of the house. This hole was filled with loose tules,
513 the tules being covered by several thicknesses of tule mats. On top of this crude inner-spring mattress was thrown, if obtainable, the skin of a grizzly bear, the hair being upward. The sleeper lay on one-half of the bear skin and pulled the other half over him. In case of severely cold weather a rabbit skin blanket might be used next to the sleeper, the whole making probably as comfortable a bed as one could wish.

251 "With the possible exception of acorns stored in an outside
353 granary, the food supply for the entire family group was stored inside the house. Baskets and bags full of all sorts of seeds and dried fruits, tule roots, grass nuts, prepared acorns and other food stuffs too numerous to mention, filled the space next to the wall between the heads of the sleepers. Dried acorns

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Web-puk'-in and Ne'-we-un showing the interior of a Yokuts tule-thatched house and a bed. A shallow pit is filled with loose tules and covered with a tule mat. Covers consist of a doubled rabbit-skin blanket. Hanging from the house frame is a twined and a tule chewmish, or all-purpose hanging baskets. The large basket at the left shows kota, or obsidian arrow point. The one at the front right shows quail, arrow ... nt and anta.

and meats and fish were suspended from the framework of the house overhead. In addition to these things was the usual collection of wild animal skins, prepared basketry materials, fiber for making string, and any amount of other raw materials from which were to be prepared the various articles necessary to the life of the Indians.

"At every permanent village occupied by two or three hundred Indians, there were probably from four or five to as many as a dozen of these larger semi-permanent houses. They were usd for ten or twelve years, or until there was a death in the family, at which time the Indians burned the house in which the death occurred."

Often a sick or aged person was carried outside to die, so that it would not be necessary to burn the house. In 1937, *Ichow*, last Chief of the *Wakchumne*, died of dropsy after several days of exposure under a broiling July sun, because he

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abroad gathering foodstuffs, the Indians lived in crude shelters, or huts, more than they did in permanent houses.

When the salmon were running in the San Joaquin River the Yokuts migrated to that place. During the season when millions of wild ducks and geese entered the valley, the Yokuts were to be found about the sloughs and swamps snaring them and shooting them with their bows and arrows, gorging themselves upon the fresh meat, and drying much of it to be carried many miles across the plains to the permanent villages.

The arrangement of the village was not as haphazard as we might be led to suppose. There were some rules governing the arrangement of the camp. These rules might be likened to some of our town and city ordinances. The Headman, or Chief, of the tribe was likely to occupy the most desirable location. The sweat house, which has already been described in detail, was located down stream from the rest of the village. This was due to the fact that care was taken not to polute the streams above the village. An Indian would be careful in wading across the stream above the village. Bathing and washing were generally done at or below the sweat house.

At least one writer, Steven Powers, and several pioneer whites, as well as aged Yokuts Indians, have stated that the plains and lake houses were built and arranged with almost military uniformity. When several houses stood near each other they were erected in a straight line which approximated a row of houses in a pioneer white town.

At every village several fires were kept going in the open, day and night. A hole several feet across and a foot or more in depth contained burning coals and cooking rocks. Into this fire pit was thrown all sorts of camp refuse. A pile of dry wood lay nearby. In at least some camps there were rules that the kitchen refuse and the offal from freshly killed game must be disposed of in this family fire-pit. Deer and large game was generally dressed in the field, the carcass being carried to the camp by the men who killed it. There it was taken in hand by the women.

In well organized tribes a stranger was not allowed to enter an Indian village unattended. At the lower and upper limits of the village were situated *Winatuas* (messengers) whose business it was to meet strangers and conduct them to the chief or head man and to run all sorts of errands for him.

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threw the basket in which she had been gathering acorns, sometimes also a child three or four years of age. This burden often reached a weight of about two hundred pounds.

During the summer of 1930 the writer saw one of the two then surviving *Nutunutu* (Noo-too'-noo-too) women carrying just such a load. She had waded Kings River in water almost to her waist and was just starting on a three mile trip to Del Piedra. Although she would undoubtedly have traveled the entire distance without resting, it is of interest to note that she willingly, and probably very gladly, accepted the offer of a ride.

The ahngush is carried with the large portion slightly below the level of the head and is held in place by a flat strap, called *sho-mit'-te.* A basket cap was often worn under the carrying strap. This protected the head of the moke. The Indians call this cap *wah-coo'-moots.* In the foothills the fiber for making carrying straps is obtained from a tall milkweed, called by the Indians *hung'-uts hung'-uts.* Along the streams in the valley the fiber is often obtained from wild hemp, called *shock'h,* and sometimes from the fiber of the nettle, called *tro-we.* The strap is passed around the basket about half way between the top and bottom and across the upper portion of the forehead.

It will be appreciated by any one that great effort was necessary to bring a two hundred pound burden from the ground to the back of the moke. The basket was sometimes lifted upon a rock, or in the fork of a small tree, or upon a bank. The moke then placed her back against it, pulled the strap over her head, and walked away with it. Sometimes other Indian women, who were helping to gather the acorns, would lift the basket and place it upon her back.

Upon arriving at the rancheria, the acorns were placed in a granary. This granary was made of small branches which were bound into a circular form. The bottom of the granary was sometimes a foot or more above the ground. The granary was lined with grass and the acorns emptied into it. Some aged Indians have stated that this grass is both moth and squirrel repellent. The top might be eight or nine feet above the ground. These granaries would hold from ten to thirty bushels of acorns.

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manner as are baskets of acorns. During the season of 1931 I saw one *moke* (mo'-ke, Indian Woman) carrying approximately one hundred pounds of blackberries which she had picked during a short afternoon.

When the rancheria was reached, formerly the berries were placed upon a tanned deer-skin and allowed to dry. Today they are placed on a canvas. During the first several days that they are subject to the sun they are turned several times, so that the drying is equal on all sides. If the berries are stored in this state they will mold, so an additional treatment is necessary.

When the berries are completely dried, they are placed in a basket and taken to the mortars. There they are pounded into a coarse meal. This meal is then mixed with water and kneaded into a thick paste. The Wukchumne mash them into a paste before they are completely dry. This paste is patted into cakes and again put out to dry. Very little water is used in this process. The cakes will dry through in one afternoon. They are then gathered up and stored away in baskets inside the house.

It should be appreciated that this is really a clever way of handling blackberries. Had the uncured berries been mashed and made into cakes, they would have fermented before the cakes were thoroughly dry, but drying them in the natural state, and then pulverizing them, and adding only enough water to form them into cakes prevented fermentation.

The dried cakes required final preparation before they entered the jam state. They were again pounded in a mortar and the resulting coarse meal placed in a basket. Water was added and the whole cooked with hot rocks. The result was a blackberry jam which did not differ greatly from jam made by white persons.

The writer has noticed that the local Indians, in making jam, skim from the top of the basket the most of the seeds, which being lighter than the jam, collect there very soon after the cooking begins. Whether such refined practice was common in the old days is problematical. At any rate, the smearing of juvenile faces with blackberry jam did not originate in this territory with the coming of the first white youngsters.

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to scatter, they were turned by the Indian fence and forced into a frightened, milling mass. 224

One Indian from each tribe or, if only one tribe was present, one Indian from each family, was allowed to enter the circle for the purpose of killing antelope. It is explained that if too many persons were allowed to begin shooting, the line would soon be broken and practically all of the antelope escape. The meat was carried home. Some of it was cooked at once and eaten fresh. The remainder of it was dried for future use. [251]

There is one interesting detail in connection with the surround. It concerns the superstition of the huntsmen regarding the killing of antelope in this way. Sometimes, as the running antelope passed one of the Indians who was doing the shooting, a sharp whistling sound was heard. 224 825

Whether this whistle was caused by the passage of the running animal through the air, or by his breathing, is unknown, but the Indians regarded this noise as of great significance. They would not shoot an antelope from which this sound seemed to come. They said it was made by the ghost of *Peek'-ook*, the little Ground Owl, which after death selected some particular antelope to guard. This attitude on the part of the hunters can be better understood when it is known that the Ground Owl was the represenatitve of the *Ahanich*, or professional singers, who performed at the *Lonewis*, or annual ceremony for the dead. [776] [533 769]

SNARING AND STALKING

Snaring was one of the most interesting and clever Yokuts methods of taking game. We are assured by Indians and pioneer white settlers that almost all kinds of game were taken in this way, ranging in size from the ground squirrel to the elk. 224

The method of snaring was practically the same for all animals. A twig or limb was bent downward and fastened in place by a trigger. Attached to the trigger was a loop made of waxed string, or heavy cord. The loop was placed over a trail, or run-way, or in the mouth of a burrow in such a way that the game would pass part way through it and become entangled in it. As the animal struggled to free itself, the trigger was released and the branch sprang up-right, lifting the game partly or entirely from the ground, where it soon strangled.

In snaring small game a wythe was generally used. The larger end of it was thrust into the ground and the tip bent

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227 shorter, and blunt on the end. It was lashed opposite the first, making the two projecting pieces about an inch apart.

"On the blunt end of the second piece was fitted by means of a socket a short, sharp piece of bone or hardwood. It was attached to the pole by means of string through a hole near the middle.

"This string had several inches of slack in it. When the fish was speared, the unjointed tip would pull out, and the socketed tip would be disengaged and turned crossways inside of the fish.

"The fish was then attached to the end of the pole with a short piece of string and could be hauled in without any danger of breaking the gig with its struggling.

"I believe that the unjointed point was necessary in order to keep the other point from slipping off the fish.

"In using the gig they built a sort of scaffolding over the water. A deep place in the stream was selected and two long poles set on end ten or fifteen feet from the bank.

"These poles were about ten feet apart at the bottom and crossed at the top about level with the bank. Where they crossed they were lashed together.

"Then the ends of two more long poles would be placed in the crotch above where the first two poles crossed, with the other ends resting on the bank about ten feet apart.

"This formed two V shaped arrangements with the points of the V's together, the open part of one on the bed of the stream and the other on the bank.

"Across the horizontal poles were laid smaller poles and branches to make a dense shade. The fisherman lay on his stomach on top of the branches and dropped the point of the gig down through an opening in them.

"When the fish passed into the shade below, it could be seen and was promptly gigged."

226 136 ● 251 Many of the fish obtained in this manner were known as steel heads; they were large fish resembling both the salmon and the trout. The meat of these as well as many others, was dried and smoked in large quantities. Being cured in this way, the fish could be preserved from one year to another. Along the San Joaquin river, we are assured that many tons of salmon were taken each year during the annual "run" and that the bushes and banks about the rancherias were red with drying fish.

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the house. You generally lived by your grandmother or by your good friends. 159 342

The tule house had a row of posts down the middle. They had forks at the tops. On top of the posts we put long poles. Then we leaned poles against the long poles at the sides. On top we put long tule mats. We made the mats nice and smooth. The tules ran up and down. We tied them together with tules. We could roll them up like a rug. They kept the water out good. 592

Inside the Che we kept everything—acorns, dried *sah'-pahl* (jack rabbit) and *i-ke' em* (elk) and *suey'-yohl* (antelope) and *lo-pits* (fish). We hung all of these on the poles. 159 251 262

We dried lots of *mah-mil* (blackberries) and *saw-ha'-mik* (mushrooms) too, and put them in baskets. We had lots of seeds in baskets. The house was full of things to eat. We always had plenty.

The Chunut and Wowol cooked the white-shelled lake clams in large bunches like you call a clam-bake. They called the clam *trah'-sheep* and the clam-bake *hah-pots'-ahk*. First they put on the ground a layer of tules four or five inches thick. Then they put the clams on top, with the open edges down as thick as they could, so they would not roll over. They piled tules on top of the clams. Then they set fire to them. When the tules burned, the water ran out of the clams and steamed them so they cooked nice. My people ate lots of them that way. They were good with salt from salt grass. Sometimes they baked lots of fires of them. 159 252 262

We gathered lots of salt from salt grass. Lots of Indians used to get their salt at a place about three miles north of Guernsey. I have gathered salt there lots of times. The salt comes on the leaves of the grass in little round pieces. We gathered the grass in the afternoon when it was damp and stacked it in big piles. After dinner we put the grass on an elk skin and hit it with sticks. The dry salt fell off and we threw the grass away. It made a good salt. We called it *ahlet* (ah'-leet). 159 222 263

We made another salt by burning a different salt weed. We called it *tiit* (tih'-it). It was not as good as ahlet.

The old-time Chunut Indians did not use much acorn mush. They used more tule roots. They did not have to take the bitter out of the tule roots. They ate some of the tender roots raw and pounded up the old roots. 159 252 262

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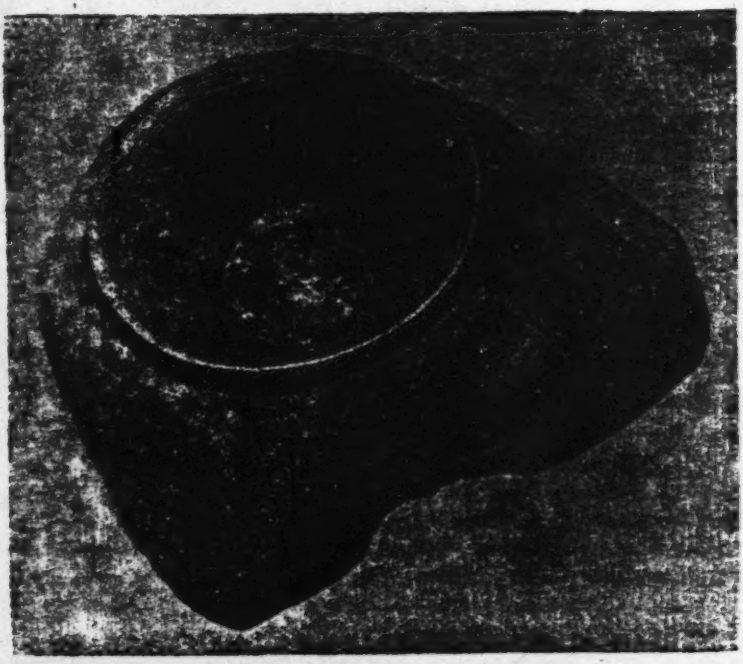

A Wukchumne Yokuts wooden mortar with basket hopper.

159 The valley acorns would not keep very well. We could not
251 store them in granaries like we did the mountain acorns. We had to take off the hulls as soon as we gathered them. Then we drilled holes in them and put them on strings. We hung the strings of acorns in the house. We thought that it was the smoke that kept the worms from eating them.

159 My people used some rock mortars to pound seeds in, but
412 they used lots of wooden mortars, too. My mother had a big wooden mortar when I was a little girl.

When an oak tree would fall down the Chunut women would take the bark off of the trunk and make mortars in the top of it. They used coals to burn holes in it. I remember lots of trees with three or four mortars in them. The women would sit on the tree trunk and pound acorns and seeds.

159 In the long tule house each family had its own door. You
342 could not go through the next place unless you knew it was all
592

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159 This was a fine place to camp. I have been there since
166 and know it was close to the Artesia school house where the
361 steamboat used to land. The white people built a big canal right by the camp and Mr. Sweet had a slaughter house there the last time I was there.

There used to be a big village there, so my mother told me.
[342] When we went there we saw lots of old, tumble-down dirt houses. I never saw any other dirt houses. Two of those houses were good, so we put our things in them.

We had a fine time at this place and my mother and step-father decided to make a home there and stay there all of the time. There were lots of fish in the creek and the lake was right close, I think not more than a half mile away. The village had belonged to my father's people, so we thought we had a right to stay there.

● [251] My step-father and his brother caught lots of fish and we dried the meat. We fixed up the two dirt houses so we could live in them and we all felt as happy as could be. There were no other Indians there but the ones I told about.

159 We were at the camp about three months, until summer
166 was almost over. Then some men came along gathering cattle.
648 It was Pat Murray from Porterville and some of his vaqueros. He camped there for two or three days.

Pat Murray was mad at us. He told us we would have to get out and stay out. There was a Tule River Indian with Murray. He was a vaquero. He told us that Murray would kill us if we did not get out. He said that Murray was afraid we would kill his cattle.

We had not killed any of the cattle. There were lots of them around the Buzzard's Roost, but we had not killed even a calf. We would never kill them.

We felt very bad about this. Murray went away and we stayed about one week more. We felt so bad we did not talk to each other for two or three days. Then my step-father talked. He had been out fishing with his brother and when he came in he said they had decided to go to the Tejon ranch where some of his people lived.

I have always been sorry that we left Heuumne, because Mr. Blankenship told us afterward that we did not have to leave. He said that Pat Murray had no right to run us off. He did not own that place. Mr. Blankenship said that we should

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have gone to see Mr. Crossmore, who had the right to that place. But we never knew it then, so we left.

The three men and my mother had worked about a week making a tule boat to fish from. We children had helped by carrying tules. It was a real good boat. They had fished from it a lot. The boat was about twenty-five feet long and eight feet wide. It was made of tules like the old-time Indians used to make them. They made it on the ground at the edge of the water. We called it *Tutoi* (too'-toi).

The tules were just tied into small bundles as long as the boat and about six inches through at the middle. The ends were pointed. A lot of these tule bundles were tied together. They made a big boat about three feet high. I think it took about twenty small bundles.

An extra bundle was tied along the top on each side so things would not lose off of the boat. The ends of the tule boat were higher than the middle.

In the middle of the boat a hole was made to spear fish through. It was a small hole about a foot across. We called it *kot-la'-um*. At the front end of the boat was a hole where they put the fish and ducks they caught out on the lake. It was about three feet square and a half foot deep. The men used to bring this place in full of fish and ducks. This hole was lined with tules woven together like a basket. We called it *traw-trawk'-oi*.

At the back end of the boat was another hole filled with mud. They built a fire on this mud and cooked fish and ducks while they were out on the lake. We called the fireplace *tri-ahn'-cut*.

Sometimes they stayed out on the lake fishing for three or four days. When they stayed out a long time on the raft they used to cut the fish open and smoke them over the fire and lay them on the raft to dry. When they came in the fish were almost dried. They used to cut the meat off the ducks and dry it the same way. They used long poles to move the raft around. We called these poles *iyahish* (i-yah'-ish).

When they came in with the boat we would all help to pull it up on the bank to dry out. When it would dry out it was very light. This boat carried all of us very easily. I think it would have taken that many more people.

Finally my stepfather changed his mind. He decided to go across the lake on the boat to *Chaw-lo'-win* on Atwell's Island.

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old-time Indians catching elk with a rope like a reata fastened to an oak tree. They bent a limb down to hold the rope. I never saw that, but I am sure they did it.

Once, while we were at Chawlowin, we caught *sah'-pahl* [jack rabbits]. We called the drive *How'-sik Ho-ah'-mah.* There were only about fifty of us to help, but we caught about three hundred rabbits. I helped with two or three other drives near Armona, too. We went to the land east of Chawlowin to catch the rabbits. Most of us just waded across. The water was just up to our waist at the deepest place.

There were thousands of jack rabbits in the brush around the lake. We could see at least three hundred in the open places at one time. We drove them toward the net and made a close line to hold them. Everybody had a stick to throw at the rabbits. We called it *wah-traw'-he.* It was not crooked. It was almost straight. We killed lots of the rabbits with the sticks before they got to the net. When we threw the stick it whirled around and broke their legs if they were running. It was easy to kill jack rabbits with wahtrawhe if you got close to them. Sometimes they would sit quiet until you were right close. If you looked close you would see them and hit them before they jumped up.

When the rabbits got close to the net two or three men ran in with their clubs and killed them. The rest of us stood close together and kept them from running away.

The rabbits were skinned and the meat dried. We did this on the land east of the lake before we went back to Chawlowin. Dried rabbit meat was good with salt from salt grass on it. The skins we cut up to make blankets and capes.

There were lots of fish in Tulare Lake. The one we liked best was *a'-pis,* a big lake trout. They were real big fish, as big as any salmon, and good meat. There was another called *took'-mun.* I think the white people called it chub. It was not a very good fish.

One of the lake fish was *pahl-hoo'-ish.* It was the one you call sucker. Sometimes the steel-heads came in the lake too; so did the salmon. We called the steel heads *tah-wah'-aht* and the salmon *ki'-uh-khot.* We dried lots of fish. When it was dried and smoked, the salmon was the best. We ate salt grass salt with the dried fish. That made it good.

Another great big fish used to come in the lake sometimes. I remember that we caught one at Henumne when the water was

177 village life completely—as is suggested by the fact that
*16 the rancheria was "divided" when the horses arrived. In
262 order to catch the horses for food other horses were essential for rapid transportation to and from the coastal settlements. New arts and skills had to be learned, and new categories of labor had to be evolved.

Rodriguez found among the Hoyima as a whole 87 to 107 live horses (27 captured, 60-80 in the wilderness), which were presumably about to be killed and eaten, together with 100 animals already slaughtered. The total thus reached approximately 200. The question now is pertinent: how much food can be obtained from 200 horses? If we assume that each of these relatively light range animals weighed 800 pounds, we may deduct about 25 per cent to account for bones, hide, certain of the viscera, and other inedible parts, leaving 600 pounds which the Indians could and did consume. The aggregate is 120,000 pounds of meat. If this meat was dried and
[25] preserved, according to general practice, it was sufficient to supply 329 persons the equivalent of one pound of fresh meat per day for one calendar year. If it had to be consumed immediately or within a few days, and if every man, woman, and child ate 20 pounds apiece, it was adequate for 6,000 people. If the entire tribe, not merely one rancheria, divided the meat into equal shares, and if the tribe numbered 1,000 persons, then the share of each individual amounted to 120 pounds. Whether these figures are strictly accurate is irrelevant. They merely emphasize that a quite sizable group must have been concerned. We may therefore regard the Hoyima as being as large a tribe as the Pitcache, and estimate that the population was at least 1,000.

*161 The remaining two tribes in the valley proper, as
[10] listed by Kroeber and others, were the Heuchi and the
[31] Chauchila. They occupied the north bank of the Fresno River and the distributaries of the Chowchilla River. The ethnographic data include no more than one or two villages for each tribe. The Heuchi are referred to by Rodriguez, who says that the rancheria of the "Jeuche" was completely deserted. However, since it was the principal tribal village, it must have contained at least 200 persons. The Chauchila were also noticed by Rodriguez, who says that at "Chausila" he "captured" 142 people and "killed many." If we concede that as many escaped as were captured or killed, there must have been fully 400 in all.

101 The Nupchenches, although they are merely mentioned
131 as a possible tribe by Kroeber (Handbook, p. 485) and
*161 are doubtfully recorded by Schenck (1926), occupied an important position in the early nineteenth century. Indeed, the failure of Kroeber and Schenck to consider them seriously makes it necessary to set forth in some detail the information about them contained in the Spanish reports.

These natives were distributed along the San Joaquin River from its big bend near Mendota to approximately the mouth of the Merced (see map 4, area 5A). The first mention of them is by Moraga in the diary of 1806. He found two rancherias, Nupchenche with 250 people and Cutucho with 400 souls which was "junto a la primera llamada Nupchenche." This means that Cutucho was close to but at that time not necessarily part of Nupchenche.
[36] From the description in the diary Nupchenche was situated at or near the mouth of Santa Rita Slough in T9S, R12E, and this is almost exactly where Schenck places it on his map (Schenck, 1926, p. 133). The next visitor who left a record was José Dolores Pico in 1815. On
*161 November 7 he left San Luis Gonzaga in western Merced County (in approximately T10S, R8E) and went east to the